November 19, 2019

EPA COMMENTS

on the

DRAFT DEVELOPMENT AND SCREENING OF REMEDIAL ALTERNATIVES TECHNICAL MEMORANDUM
HOMESTAKE MINING COMPANY SUPERFUND SITE

Operable Unit 1 – Groundwater Restoration and
Operable Unit 2 – Mill Decommissioning, Surface Soils and Tailings Reclamation

Dated: August 20, 2019

General Comments:

1. Overall, the Draft Development and Screening of Remedial Alternatives Technical Memorandum (Technical Memorandum) follows the "*EPA Guidance for Conducting Remedial Investigations and Feasibility Studies Under CERCLA"* very well.

2. The Feasibility Study phase of the CERCLA RI/FS equivalency analysis should look at those areas of contamination at the Homestake Mining Company site (Site), both within and outside of the Homestake facility NRC Source Materials License SUA-1471 boundary, to determine if there is a need to develop and screen alternatives for addressing Site risks and achieving a CERCLA level of protectiveness. The Site-related contamination present outside of the NRC Source Materials License SUA-1471 boundary that may present an unacceptable risk and require remediation to achieve a CERCLA level of protectiveness are the Land Treatment Areas (LTAs) and the windblown contamination areas. These areas need to be discussed in the Technical Memorandum with regards to nature and extent and risk assessment to evaluate the need for alternative development.

3. The initial comments on the Memorandum that EPA discussed with Homestake and the New Mexico Environment Department at the last RI/FS Equivalency meeting are included with the specific comments provided herein.

Specific Comments:

1. Section 1.2.5 – Human Health Risk Assessment

    a. Section 1.2.5 lacks a discussion of the human health risks associated with areas outside of the Homestake facility, including the LTAs and the outer zone of the windblown

contamination area, which is outside of the NRC License Boundary (see Figure 1, below). Homestake has submitted a draft proprietary control for the LTAs that restrict future residential and groundwater use, but there is no discussion of the reason for needing such an institutional control for the LTAs in any future EPA decision-making. Please discuss whether there is a risk to the future resident at the LTAs. Additionally, for the windblown contamination area, the Radium-226 soil cleanup standards from 40 CFR Part 192, Subpart B used for reclamation of soil outside of the NRC License boundary are not considered protective under CERCLA. Please discuss the residual radionuclide concentrations of the reclaimed windblown contamination area based on confirmation soil sample results (Appendix C of the Draft Final RI Report) and whether the residual levels are below the calculated CERCLA risk-based PRG levels for the appropriate land uses. Additionally, please evaluate whether there are other soil areas with windblown contamination beyond the boundary of the outer zone that were excluded from reclamation because the Radium 226 levels were below the 40 CFR Part 192 cleanup standards for Radium-226 but exceed the CERCLA PRGs. Provide a table of the sample radionuclide concentrations for the outer zone soil as well as a figure (map) showing the contaminant concentration distribution to support these discussions.

b. A conclusion should be added to the end of this Section or a new Section 1.2.5.1 on Human Health Risk, similar to the section on the Baseline Ecological Risk Assessment (BERA).

2. Table 1-5 – Applicable or Relevant and Appropriate Requirements

   Please make the following revisions to Table 1-5:

   a. UMTRCA Regulations at 40 CFR § 192 Subparts A, B, and C are "Applicable" requirements only for Title I sites that are exempt from CERCLA. They are potentially "Relevant and Appropriate" requirements for Title II sites, such as the portion of the Homestake facility that will remain under federal control when turned over to the DOE Legacy Management Program.

   b. Under the "Requirement" column, UMTRCA Regulations of Subparts A and B are at 40 CFR § 192.0 and § 192.1, respectively, not § 192.2.

   c. SDWA Regulations at 40 CFR §141 – Maximum Contaminant Levels (MCLs) are potentially "Relevant and Appropriate" requirements where groundwater or surface water is considered a potential or current source of drinking water.

3. Section 1.4 – Remedial Action Objectives, page 1-34:

   a. Contaminant levels and exposure routes should be specified in the Remedial Action Objectives (RAOs).

   b. There should be two RAOs for groundwater: one to restore groundwater quality in the aquifer(s), the other to prevent exposure to humans.

c. Examples of the groundwater RAOs are as follows:

"Prevent ingestion of groundwater containing site-related inorganic chemicals of concern and radionuclides of concern in excess of state/federal ARARs or site-specific risk-based cleanup levels and a total excess cancer risk of greater than 10^{-4} to 10^{-6}."

"Restore groundwater quality to state/federal ARARs or background concentrations, whichever are higher, as appropriate, or site-specific risk-based cleanup levels for site-related inorganic chemicals of concern and radionuclides of concern in those portions of the alluvial, Upper Chinle, Middle Chinle, and Lower Chinle aquifers that have been impacted by tailing seepage from the site."

d. Based on other EPA comments herein, assess if RAOs are needed for soils in the LTAs or windblown contamination area.

4. Section 2 – Areas and Volumes of Contaminated Media, page 2-1:

The areas and volumes of contaminated soils in the LTAs and residual areas and volumes of contaminated soil in the windblown contaminated areas, if any, should be discussed. For the windblown area, an assessment should be made of the residual Radium 226 concentrations below the 10.5 pCi/g Part 192 standard in the upper 15 cm of soil and above the risk-based PRP value for Radium 226 from the risk assessment. If there are no volumes and areas of contaminated media above the risk-based PRG values in these areas, it should be stated so.

5. Section 4 – General Response Actions, page 4-1:

a. General Response Actions that restore groundwater quality do not include institutional controls (ICs). Institutional controls prevent exposure to contamination for protection of human health, which would be an appropriate RAO for groundwater (see Specific Comment 5.c., above). Please revise accordingly.

6. Table 5-1 – Initial Screening of Candidate Remedial Technologies and Process Options for Groundwater Restoration, pages 5-3 through 5-5:

a. Change the title of Table 5-1 to include Human Health Protection in addition to groundwater restoration.

b. Include "State Temporary Well Drilling Prohibition" as a Process Option for Institutional Controls General Response Actions. The New Mexico Office of the State Engineer issued an order for prohibiting well drilling for the remedial action at the former Homestake and Bluewater mill sites in May 2018.

c. Local Government Zoning Change should also be considered as a Government Control Process Option to prevent residential land use at the LTAs to protect human health from exposure to soil contamination.

d. Add a row for “Treatment” under General Response Actions, with “Off-Site Treatment” under Remedial Technology, “Well Head” under Process Options, and “Filtration at Well Head” under Description.

7. Section 5.2 – Detailed Screening of Retained Technologies and Process Options, page 5-10:

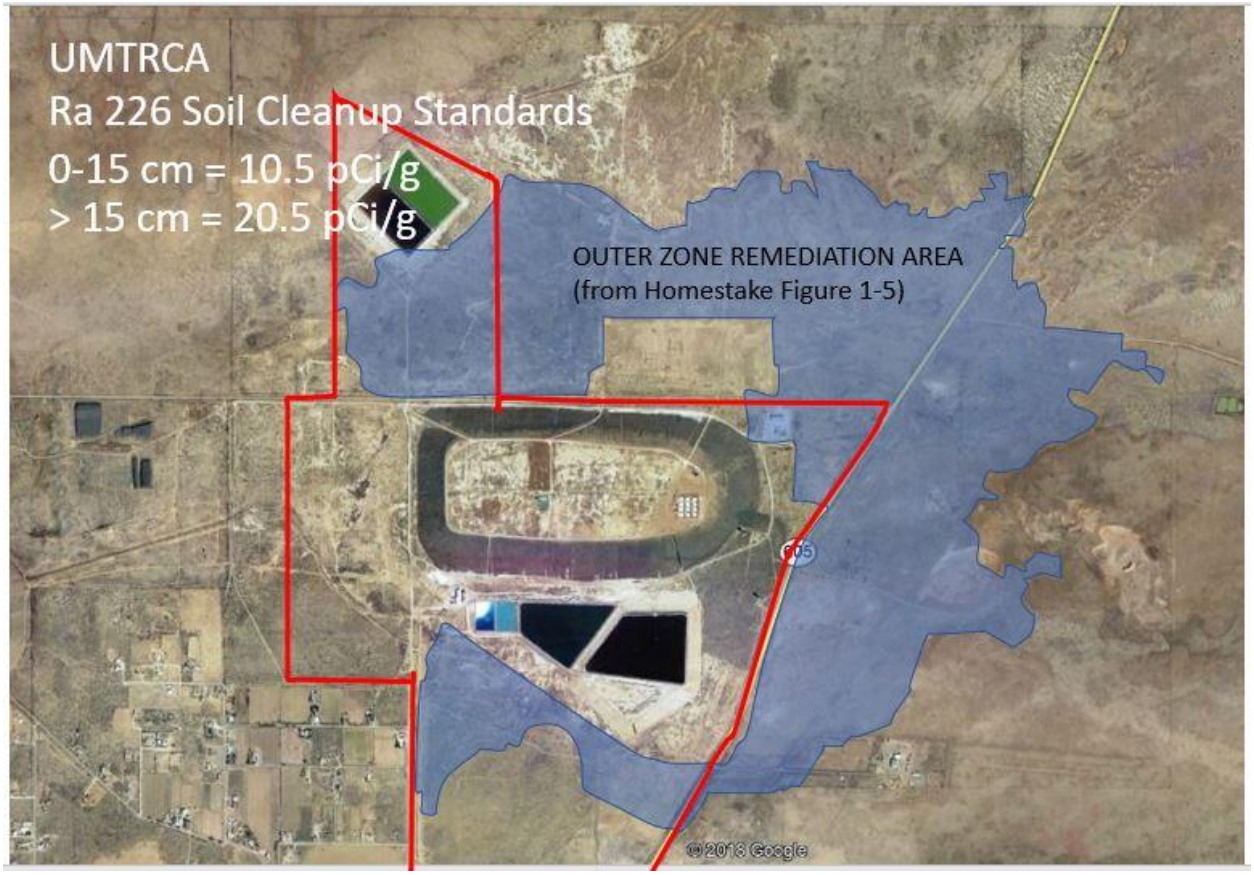
   It is noted that application and receipt of permits is not required for on-site response actions taken under Fund-financed or enforcement authorities of CERCLA. This does not remove the requirement to meet (or waive) the substantive provisions of permitting regulations that are ARARs.

8. Table 5-3 – Detailed Screening of Technologies and Process Options for Groundwater, pages 5-11 and 5-12:

   a. Include Temporary State Well Drilling Prohibition as a Process Option for Institutional Controls.

   b. Please add the “Temporary State Well Drilling Prohibition” as a Process Option for Institutional Controls to be screened.

Figure 1


UMTRCA
Ra 226 Soil Cleanup Standards
0-15 cm = 10.5 pCi/g
> 15 cm = 20.5 pCi/g
OUTER ZONE REMEDIATION AREA
(from Homestake Figure 1-5)
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